## MECHANISMS OF AGEING AND DEVELOPMENT

## **VOLUME CONTENTS**

Volume 59 (1991)

Evaluation of age-related changes in physicochemical properties and functional activity of rat adipose plasma membranes and their possible relationship G.G. Yegutkin, S.S. Sambursky, A.V. Zhitkovitch and G.G. Gatsko (Zhodinskaya, U.S.S.R.)	1
Effect of age on presynaptic beta <sub>2</sub> receptor mediated responses in the rat heart	17
M.L. Mortimer, N. Tumer, M.D. Johnson and J. Roberts (Philadelphia, PA and Gainesville, FL)	
Soluble interleukin-2 receptor release defect in vitro in elderly subjects  C. Caruso, G. Di Lorenzo, M.A. Modica, G. Candore, M.R. Portelli, G. Crescimanno, A. Ingrassia, G.B. Sangiorgi and A. Salerno (Palermo, Italy)	27
Age related changes in anti-oxidative enzymes in cardiomyopathic hamster hearts	37
K. Mailer, I. MacLeod and W. Morris (Alberta, Canada)	
Quantitative measurement of human physiological age by profiling of body fluids and pattern recognition	47
H.E. Enesco, I. Shimokawa and B.P. Yu (Montreal, Canada and San Antonio, TX)	69
Longitudinal Gompertzian analysis of lung cancer mortality in the U.S., 1968—1986. rising lung cancer mortality is the natural consequence of competitive deterministic mortality dynamics	79
J.E. Riggs (Morgantown, WV)	
Microfluorometric and fluorometric lipofuscin spectral discrepancies: a concentration-dependent metachromatic effect?	95
Cell cycle analysis in bone marrow and kidney tissues of dietary restricted rats M.H. Lu, W.G. Hinson, A. Turturro, J. Anson and R.W. Hart (Jefferson, AK)	111
Age-associated changes in antioxidants and antioxidative enzymes in rats A.K. De and R. Darad (Bombay, India)	123
Aging in brown fat: antioxidant defenses and oxidative stress	129

An unexpected periodicity among the prevalences of human age-related,	
mortal diseases	139
D.A. Juckett and B. Rosenberg (East Lansing, MI)	
Altered membrane anisotropy gradients of plasma membranes of living	
peripheral blood leukocytes in aging and Alzheimer's disease	153
J.M. Collins, R.B. Scott, D.K. McClish, J.R. Taylor and W. McLean Grogan	
(Richmond, VA)	
Elevated concentrations of $\beta$ -nerve growth factor in selected tissues from	
senescence-accelerated mice (SAM-P/8)	163
R. Katoh-Semba, R. Semba, S. Kashiwamata and K. Kato (Aichi, Japan)	
A comparative study of succinate-supported respiration and ATP/ADP	
translocation in liver mitochondria from adult and old rats	177
P.J. Tummino and A. Gafni (Ann Arbor, MI)	
Decline in histone H5 phosphorylation during erythroid senescence in chick	
embryos	189
M. Pikaart, J. Irving and B. Villeponteau (Ann Arbor, MI)	
Tail-cuff detection of systolic hypertension in different strains of ageing rats	197
R.D. Buñag and TL. Teräväinen (Kansas City, KS)	
Longitudinal Gompertzian analysis of stomach cancer mortality in the U.S.,	
1962—1987: a thermodynamic analogy of its declining mortality	215
J.E. Riggs (Morgantown, WV)	
Age-related changes in rates of protein synthesis and degradation in rat tissues	229
P.K. Mays, R.J. McNulty and G.J. Laurent (London, U.K.)	
Effect of aging on the buffering capacity of fast-twitch skeletal muscle	243
L.L. Spriet, C.B. Campbell and D.J. Dyke (Guelph, Canada)	
Age-related studies of SIg LEU-4 and concanavalin A receptor densities and	
capping in human lymphocytes	253
H.J. Cohen, K.M. Boland and K.M. Krishna Rao (Durham, NC)	
Age-related alteration of brain gangliosides in senescence-accelerated mouse	
(SAM)-P/8	263
T. Ohsawa and S. Shumiya (Tokyo, Japan)	
Thymectomy at weaning. An accelerated aging model for the mouse immune	275
P. Dutartre and M. Pascal (Daix, France)	213
Implication of lysine residues in the loss of 6-phosphogluconate dehydrogenase	
activity in aging human erythrocytes	291
E. Gordillo and A. Machado (Seville, Spain)	291
Normal transitions in synthesis of replacement histones H2A.Z and H3.3 dur-	
ing differentiation of dystrophic myotube cells. A brief note	299
A.M. Wunsch, K. Reinhards and J. Lough (Milwaukee, WI)	677
Author Index Volume 59	307
Subject Index Volume 59	309
Contents Volume 59	313
wenter . Civilia of	213

